MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

TIA2221 – INFORMATION ASSURANCE & SECURITY

(All Sections / Groups)

20 OCTOBER 2018
2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 3 pages with 5 Questions only.

2. Attempt **ALL** questions. All questions carry equal marks (10) and the distribution of the marks for each question is given.

3. Please print all your answers in the Answer Booklet provided.

Question 1

1a) The Maconachy-Schou-Ragsdale (MSR) model could be represented with a cube model. Draw the MSR cube model to illustrate the connection between Security Services, Security Countermeasures and Information States. State the other name for the model.

[4 Marks]

1b) Define the **TWO** (2) terms used as Information Assurance Principles.
i) Business Enabler
ii) Protect the Fabric of an Organisation's Systems

[4 Marks]

1c) What are the main responsibility of a Chief Information Security Officer (CISO)?

[2 Marks]

Question 2

2a) State any **FOUR** (4) common threats associated with information assurance.

[4 Marks]

2b) An organisation's web site has been collecting the actions of users for several years now. The web site was a social media overnight success, and the organisation never got around to completing a privacy statement or terms of service. The organisation has been selling the demographic information to advertisers and market researchers as part of its core business for more than a year now. The organisation receives a legal summons related to privacy concerns of the site.
What could have been done in the beginning to prevent the legal exposure?

[4 Marks]

2c) Describe the two-person rule.

[2 Marks]

Question 3

3a) An organization has never had a formalized information assurance program. What kind of an approach is most likely currently implemented, and what are the advantages and disadvantages of the approach?

[4 Marks]

3b) What is end-to-end security? Why is end-to-end security important?

[4 Marks]

Continued...

3c) Explain **TWO** (2) benefits of network-based assessment.

[2 Marks]

Question 4

Suppose you are the information officer entrusted in assessing information security relating to a sporting event. The organisers sell tickets online and post them once payment is accepted. You are only concerned with the risk of someone creating fraudulent ticket orders.

4a) Describe a risk assessment for the fraudulent ticket orders?

[6 Marks]

4b) Describe the highest **TWO** (2) risk factors to be.

[2 Marks]

4c) Give **ONE** (1) disadvantage of live acquisition.

[2 Marks]

Question 5

5a) Describe and contrast the function of each of the following basic components in a PKI system:
- Certification authorities (CA)
- Registration authorities (RA)

[4 Marks]

5b) Identify and describe security mechanisms/methods that can be used to implement the required security service/protection for keys.

[4 Marks]

5c) Illustrate **TWO** (2) needs of a honeypot.

[2 Marks]

End of Paper